

What is claimed is:

1. A magnetic assembly for mounting to a circuit, the magnetic assembly comprising:
 - a winding having a first end, a second end and a wound portion; and
 - a core disposed around at least a portion of the winding, wherein:
 - the first end of the winding extends outward from the wound portion to define a linear support;
 - the second end of the winding extends outward from an opposite side of the wound portion to define a point support; and
 - wherein the first and second ends of the winding are adapted to mount to the circuit.
2. The magnetic assembly of claim 1, wherein the linear support is adapted to mount to the circuit along a line defined by at least two contacting points, and wherein the point support is adapted to mount to the circuit on at least one contacting point.
3. The magnetic assembly of claim 2, wherein the contacting points define a bounded geometry and wherein the centroid of the assembly is located within orthogonal projections of the bounded geometry.
4. The magnetic assembly of claim 3, wherein the centroid of the assembly is positioned below the first and second ends.
5. The magnetic assembly of claim 1, wherein the second end of the winding has a convex curvature defining the point support.
6. The magnetic assembly of claim 1, wherein the first end of the winding has a linear portion defining the linear support.

7. The magnetic assembly of claim 1, wherein the core includes a ferrous material.

8. The magnetic assembly of claim 1, wherein the core comprises a first portion and a second portion, wherein the first and second portions are affixed to one another.

9. The magnetic assembly of claim 1, wherein the core has at least one substantially flat surface adapted for engagement by a surface mounting apparatus.

10. The magnetic assembly of claim 9, wherein the core has two opposing substantially flat surfaces.

11. The magnetic assembly of claim 1, wherein the core has outer side edges adapted to be positioned within a mounting aperture through a substrate having the circuit thereon.

12. The magnetic assembly of claim 1, wherein a central portion of the core is positioned within the wound portion.

13. The magnetic assembly of claim 1, wherein the core has side apertures along outer side edges of the core, the side apertures having the first end of the winding projecting therethrough and the second end of the winding projecting therethrough on an opposite side of the wound portion.

14. The magnetic assembly of claim 1, wherein the first and second ends of the winding are adapted to be reflow soldered to the circuit.

15. The magnetic assembly of claim 1, wherein the core is an RM-shaped ferrite core.

16. A magnetic device, comprising:

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a circuit board having an upper surface, a lower surface and a mounting aperture therethrough between the first and lower surfaces;

a magnetic assembly positioned through the mounting aperture and mounted to the circuit board, wherein the magnetic assembly includes;

a winding having a first end, a second end and a wound portion; and

a core disposed around at least a portion of the winding, wherein:

the first end of the winding extends outward from the wound portion to define a linear support;

the second end of the winding extends outward from an opposite side of the wound portion to define a point support; and

wherein the linear support and the point support of the first and second ends mount onto the circuit board and support the assembly.

17. The magnetic device of claim 16, wherein the linear support mounts to the circuit board along a line defined by at least two contacting points, and wherein the point support mounts to the circuit board on at least one contacting point.

18. The magnetic device of claim 16, wherein the contacting points define a bounded geometry and wherein the centroid of the assembly is located within orthogonal projections of the bounded geometry.

19. The magnetic device of claim 16, wherein the centroid of the assembly is located below the upper surface of the circuit board.

20. The magnetic device of claim 16, wherein the second end of the winding has a convex curvature defining the point support.

21. The magnetic device of claim 16, wherein the first end of the winding has a linear portion defining the linear support.

22. The magnetic device of claim 16, wherein the core includes a ferrous material.

23. The magnetic device of claim 16, the core comprises a first portion and a second portion, wherein the first and second portions are affixed to one another.

24. The magnetic device of claim 16, wherein the core has at least one substantially flat surface adapted for engagement by a surface mounting apparatus.

25. The magnetic device of claim 24, wherein the core has two opposing substantially flat surfaces.

26. The magnetic device of claim 16, wherein a central portion of the core is positioned within the wound portion.

27. The magnetic device of claim 16, wherein the core has side apertures along outer side edges of the core, the side apertures having the first end of the winding projecting therethrough and the second end of the winding projecting therethrough on an opposite side of the wound portion.

28. The magnetic device of claim 16, wherein the magnetic device is reflow soldered to the circuit board.

29. The magnetic device of claim 16, wherein the core is an RM-shaped ferrite core.

30. A magnetic assembly for mounting to a circuit, the magnetic assembly comprising:

a winding including:

a first lead end having a linear portion defining a linear support and having at least two contacting points along the linear support;

a second lead end having a convex curvature defining a point support and having at least one contacting point substantially coplanar with the at least two contacting points; and

a wound portion;

a core disposed around at least a portion of the winding wherein:

the first lead end of the winding extends outward from one side aperture in the core;

the second lead end of the winding extends outward from another side aperture in the core on an opposite side of the wound portion; and

wherein the linear support and the point support are adapted to mount onto a circuit wherein the contacting points define a bounded geometry having the centroid of the assembly located within orthogonal projections of the bounded geometry.

31. The magnetic assembly of claim 30, wherein a central portion of the core is positioned within the wound portion.

32. The magnetic assembly of claim 30, wherein the core comprises a first portion and a second portion, wherein the first and second portions are affixed to one another.

33. The magnetic assembly of claim 30, wherein the core has at least one substantially flat surface adapted for engagement by a surface mount apparatus.

34. The magnetic assembly of claim 30, wherein the winding is mounted to a circuit board and positioned through a mounting aperture in the circuit board.

35. The magnetic assembly of claim 30, wherein the centroid of the assembly is positioned below the first and second ends.

36. A magnetic assembly for mounting to a circuit, the magnetic assembly comprising:

a winding including:

a first lead end having a linear portion defining a linear support and having at least two contacting points along the linear support;

a second lead end having an extension defining a second support and having at least one contacting point substantially coplanar with the at least two contacting points of the first lead end; and

a wound portion;

a core disposed around at least a portion of the winding wherein:

the first lead end extends outward from one side aperture in the core;

the second lead end extends outward from another side aperture in the core on an opposite side of the wound portion; and

wherein the linear support and the second support are adapted to mount onto a circuit wherein the contacting points define a bounded geometry having the centroid of the assembly located within orthogonal projections of the bounded geometry.

37. The magnetic assembly of claim 36, wherein the second support has a linear portion defining a linear support having at least two contacting points along the support.

38. The magnetic assembly of claim 36, wherein the second support has a convex curvature defining a point support.